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## Cessna 340

A fast, pressurized cabin-class twin that's an excellent step-up from a high performance single.

Although airplanes are often sold as business and transportation tools, the reality of ownership falls short of the ideal. They either lack the range, the carrying capacity or the ability to deal with real-world weather, thus an airline or a charter outfit gets the call.

Still, there are plenty of pilot/businessmen who couldn't function without an airplane. These owners typically start with single-engine airplanes and quickly outgrow them for the reasons stated above. A serious business airplane needs a decent cabin, credible speed and the ability to hack it when there's ice or thunder in the forecast. Pressurization is nice since the clients don't want to spend several hours with a plastic hose stuck up their noses.



**The Cessna 340 is a standout thanks to payload/fuel flexibility and near 200-knot cruise speeds. Pressurization is an added plus.**

Enter the Cessna 340. Owners looking to step-up from a high-performance single will inevitably make a pass or two through the 340 classified section. And well they should. Although not without its shortcomings—most notably certain loading limitations and an overly complex fuel system—the 340 is nevertheless an impressive, flexible and capable airplane that meets the business mission well and can do double duty as a family airplane.

### Model History

The 340 owes its existence to the boom days of general aviation during the late 1960s and early 1970s. It appeared in 1972 as a lower-cost alternative to the Cessna 414, which had arrived in 1970. In those days, the twin market was still a work in progress and it was stratified.

At the entry level, you had Twin Comanches, Apaches, Aztecs, Baron and the Cessna 310. At the upper end, the ritzy cabin-class Cessna 421, Beech Duke and Piper Navajo met the needs of well-heeled owners who could afford megabucks for an airplane. The 340 found its niche in between; a cabin class, yes, but a modest one with an affordable price tag.

Although it carries a 300-series number, the 340 and 414 are similar, sharing the same wing, flaps, ailerons, landing gear and engines. Like the 414 and other cabin twins, the 340 has an air-stair door, thus you don't need a ladder to get into it, as some have jokingly complained about the long-legged Cessna 310. With the same engines as the 414 but at a lower weight, the 340 is faster than the 414 on the same fuel burn. But there's no free lunch; it gives up some payload to the higher-priced model.

Engines installed in 340s from 1972 through 1975 were Continental TSIO-520Ks, which produce 285 HP at 33 inches manifold pressure from sea level to 16,000 feet. However, most of the K engines in early 340s have been converted to Js or Ns.

The TSIO-520J engine, used on early 414s, produces 310 HP at 36 inches manifold pressure. The N engine, installed on later 414s and 340s (the N-engine airplanes are called 340As),

produces 310 HP at 38 inches.

The major difference between the K engine and the J and N variants is that the latter are equipped with intercoolers which wash the heat out of the turbocharged induction air as it flows on its way to the cylinders. This yields better power and efficiency without stressing the jugs, something that's good for longevity.

The N engines produce their rated 310 HP up to 20,000 feet and provide higher cruise speeds and better climb and single-engine performance. Three-blade McCauley propellers, formerly an option, also became standard equipment in 1976; earlier 340s came with two-blade McCauleys.

These airplanes are prized for being all-weather machines but certification for flight into known icing conditions, when properly equipped, came only in 1977. The following year, a maximum ramp weight of 6025 pounds was approved and max weight for takeoff and landing was set at 5990 pounds for the 340A, compared with 5975 pounds for the 340. The last significant change in the line came in 1979, with the switch to TSIO-520NB engines (the B denotes a heavier crankshaft). Subsequent modification of cylinders, valve lifters and piston pins by Continental increased TBO of the NB engines from 1400 to 1600 hours in 1983.

But Cessna didn't build any 340As (or much of anything else) that year and after putting together a scant 17 of the airplanes in 1984, production was terminated for good, with a total of about 1297 aircraft made. Some 923 are still registered.

### Systems

As basic systems go, the 340 is unique on two accounts. One, it has pressurization and two, it has a complex fuel system that isn't something the novice should confront without training.

The pressurization system is the same as those found in Cessna's 400-series twins, with a maximum differential of 4.2 PSI providing an 8000-foot cabin up to 20,000 feet. Above that, the cabin climbs with the airplane. Cessna offered an automatic pressurization control, which activates and deactivates while climbing or descending through 8000 feet. A few airplanes have it but more buyers opted for the variable-control system, which allows the pilot to program cabin altitude and rate of climb.

The variable system maintains a sea-level cabin up to 9000 feet, then delivers the pilot-selected cabin altitude until a 4.2 PSI differential is reached.

As pressurization goes, the 340's is relatively easy, requiring just a quick check and set for each flight. The pilot merely dials in field elevation plus 500 feet before takeoff and landing and selects desired cruise cabin altitude on initial climb. The rest is simply monitoring the system to make sure it's delivering the commanded numbers. While the pressurization is easy, the same can't be said for the fuel system. Start with the tip tanks—which are the mains in this airplane. They hold 100 usable gallons. Add up to four auxiliary wing tanks, two holding 40 gallons, the other two holding 23 gallons. Throw in locker tanks, which add another 40 gallons. That's up to 203 gallons in tanks peppered throughout the length of the wings.

Where things get tricky for the uninitiated is which tank to use when. Use the mains, alone, for takeoff and landing. The engines feed directly from the auxiliary tanks, but fuel in the lockers has to be transferred to the mains. Of course, you have to make room in the mains first, otherwise you'll vent the pumped fuel over the side.

And if you have only one locker tank (which many 340s do have), remember to use crossfeed; dump all 120 pounds from a locker into one tip tank, and the imbalance will be enough to upset even your autopilot. Unfortunately, Cessna never got around to simplifying the fuel systems in its 300-series twins (Crusader excepted) as it did in most of the 400s. And for whatever reason, Cessna chose to designate the tip tanks "main," just as they did on the 310. This can, and has, caused some problems. Ramp attendants have filled the wrong tanks ("Just top off the mains...") and pilots, particularly transitioning pilots, have switched to the aux tanks thinking they were drawing from the tips, and vice versa.

Despite this Byzantine fuel system design, the 340 hasn't suffered an inordinate number of fuel-related accidents. However, what we don't know is how many inadvertent inflight stoppages or unscheduled landings have occurred because of confusion over the fuel system.

### Performance

The 340 is definitely a high flyer, with a service ceiling of nearly 30,000 feet. But most owners wisely operate in the high teens to mid-20s, where the airplane can be expected to true between 190 and 205 knots on about 30 gallons per hour at 65 percent power and 200 to 217 knots on 32 to 34 GPH using 75 percent power.

Rate of climb at sea level is a respectable 1650 FPM, but climb performance tapers above 20,000 feet to a dawdling 300 to 400 FPM in the mid-20s. Not bad as twins go, but certainly no turboprop, either.

The 340's claimed single-engine rate of climb is 315 FPM, better than the 414 (290 FPM), Beech P58 Baron (270) and the Piper 601P (240) and 602P (302) Aerostars. In its class, the 340 is bettered in climb only by its lighter, centerline-thrust stablemate, the pressurized Skymaster, which climbs 375 FPM on one engine. Single-engine minimum control speed is 82 knots. Stall speeds are 79 knots, clean, and 71 knots in landing configuration.

Not all twins of the 340s days have accelerate-stop and accelerate-go performance tables but, to Cessna's credit, the 340 does. Under standard conditions, a 340 that loses an engine at lift-off speed (91 knots) can be brought to a full stop within 3000 feet of brake release. The POH also indicates that should a pilot decide to fly after losing one on lift-off, the airplane will clear a 50-foot obstacle after traveling less than 4000 feet over the ground after brake release. (This assumes the pilot does everything right, of course.)

The performance figures above are for 340s with 310-HP engines. Those that still have 285-HP K engines (if any) are nearly 20 knots slower in cruise, use roughly 200 feet more runway for takeoff and climb 1500 FPM on both engines, 250 FPM on one.

### Comfort, Handling

Cessna's big twins have a reputation for being comfortable and easy to handle and the 340 fits that mold, although not entirely without warts. The airplane owes its speed to a relatively slick airframe and because it has flap and gear operating speeds that are on the low side, it can be a handful to go down and slow down at the same time.

For example, flaps can be extended 15 degrees at 160 knots (the limit is 156 knots in the first 300 airplanes built) to help slow the airplane to max gear-extension speed, a pitiable 140 knots. But slowing the airplane to 160 knots without stressing the engines can be a problem, if you believe in the shock cooling genie. Owners say descents and approaches require planning and occasional persistence with ATC if a slam dunk is in the offing.

Once the airplane is slowed down with gear and flaps deployed, however, it tends to sink like a rock, according to owners, and some power must be maintained right into the flare. This is due in part to the flaps, which are of the split variety: great at producing drag, but not so good at increasing lift.

Entering the airplane through the luxurious airstair door gives a big-iron feel. But for the pilots, that wears off quickly when they have to squeeze through a narrow (seven-inch) opening to their seats. Once you're seated, the cabin is quite comfortable up front. The 340's cabin is 46.5 inches wide and 49 inches high, about the same size as an Aerostar's and 4.5 inches wider than a P-Baron's.

### Payload

If owners have any consistent complaints about the 340 line, they relate to payload, or lack thereof. Most cabin-class Cessnas are well equipped and can accommodate around 1600 to 1700 pounds of fuel and payload; some carry even less than that.

Load enough gas for a 4.5-hour flight with reserves and you can take along only two passengers and their bags. Fill the seats with 170-pound FAA clones and pack away their regulation 30 pounds of baggage each and you can carry enough fuel for less than two hours of flying.

Considering the payload limitations, the baggage space in the 340 seems a cruel joke. Among the cabin, nose and locker compartments, there's a cavernous 53 cubic feet of space in which a maximum of 930 pounds can be crammed. That is, however, the maximum. Most 340s have at least one fuel tank occupying a locker and nose baggage compartment space typically is

compromised by avionics gear.

There's good news, though. The installation of vortex generators brings with it a 300-pound increase in gross weight and considering an entire VG kit weighs about as much as the air in your tires, it's about as close to a free lunch as you can get. One owner called the installation of VGs a real "no-brainer." While there's no way to prove this, we suspect that the efficacy of the vortex generator kits has served to boost the value of 340s at a surprising rate. If you're considering a 340, by all means consider vortex generators.

### **Maintenance**

Like any other high-performance airplane, a 340 is not one to tolerate skimpy maintenance. If overhaul prices in the \$23,000 to \$25,000 range (times two), annual inspections at several thousand dollars and operating expenses above \$200 an hour are enough to curl your toes (as they do ours), don't expect to have a good time owning a 340. You can't operate these airplanes on a shoestring.

But those with the budget to consider a high zoot ride should get their money's worth out of this airplane. Some things to watch out for: First, there are the TSIO-520 crankcases, which have a history of cracking. In mid-1976, Continental switched to heavier cases, which helped a bit but certainly provided no panacea. A couple of knowledgeable sources estimated that about two-thirds of the engines flying in 340s right now probably are cracked in one place or another.

But not all cracks are critical and there's a general sense that catastrophic engine failures caused by crankcase cracks are on the decline. The reports also showed cracked cylinders and cylinder heads to be a rather frequent problem, as are premature cylinder wear problems in Continental factory jugs. (This seems to effect all large-displacement Continental engines.)

Cracked and blown-out cockpit windows were the subject of several reports, as were cracked Bendix mag housings and distributor blocks, loose horizontal and vertical stabilizer attach bolts and cracked waste gate couplings.

As far as ADs go, the 340 has its share; it's neither the best nor the worst in this regard. Of most concern recently is AD 2000-01-16, which requires repetitive inspection, repair or replacement of exhaust components in a range of Cessna twins, not just the 340. This AD was issued in response to cracks/failures that led to catastrophic fires.

AD-97-0-13 requires replacement of certain hydraulic, oil and fuel hoses while another, 88-03-07, requires inspection of fuel crossfeed lines for chafing and modification of firewall stiffener flanges and fuel lines. AD 87-23-08 calls for ultrasonic inspection of the crankshafts, as does 97-26-17. Speaking of crankshafts, some 340s were involved in the Continental crankshaft recall of 2000. The logbooks should reflect this and it's AD 2000-08-51.

AD 96-20-7 calls for repetitive inspections of the Janitrol cabin heater while 96-12-22 requires repetitive inspections of the oil filter adapters. 95-24-5 deals with repetitive prop inspections and 90-2-13, a type-specific directive, called for replacement of the main landing gear inner barrel bearings.

One important directive to check for is 82-26-05, which requires visual checks for cracks in the rudder balance weight rib every 100 hours until a new rib is installed. Such cracks have been the subject of numerous service difficulty reports.

### **Mods, Owner Groups**

The 340 fleet has been a popular model for engine modifications performed by RAM Aircraft Corp. RAM, which enjoys an excellent reputation among owners of 300- and 400-series Cessnas, has offered a variety of mods under different names.

There are several mods, among which are the (now discontinued) Series II, new Series IV and Series VI packages, which feature a variety of improvements including new camshafts manufactured by Crane, new steel cylinders and Hartzell Q-tip props (Series II only), among other things. The packages include a seventh stud on crankcase cylinder pads, which reduces the stresses in these areas that often cause cracks. (Contact RAM at [www.ramaircraft.com](http://www.ramaircraft.com) or 254-752-8381.)

Improved turbocharger intercooling systems are available from American Aviation and are highly recommended by owners. The installation includes ram-air inlet ducts under the engine nacelles and more efficient (American says 28 to 70 percent more efficient) heat exchanger cores. The company says its system cuts the temperature of air entering the engine from about 170 degrees to 80 degrees, improving rate of climb by up to 300 FPM and adding up to 15 knots in cruise. (Contact American at: [www.americanaviationinc.com](http://www.americanaviationinc.com) or 208-762-8815.)

A STOL mod for 340s was offered by Sierra Industries and included installation of Robertson-designed Fowler flaps and a trim spring that precludes the need to retrim the elevators when the flaps are raised or lowered. Sierra says the mod decreases accelerate-stop distances by 40 percent and improves short-field performance about 15 percent. Although still supported, the mod isn't available for new installations. Contact Sierra at [www.sijet.com](http://www.sijet.com) or 830-278-4481.

Precise Flight makes speed brakes for the Cessna 340. They're of novel design and project into the airstream from a snug enclosure at the aft end of the engine nacelles. Contact Precise Flight at [www.preciseflight.com](http://www.preciseflight.com) or 541-382-8684.

One of the most intriguing safety-enhancing mods for the C-340 are the aforementioned vortex generators, which for all intents and purposes eliminate Vmc and give great control at low airspeed. A bonus is a 300-pound boost in the gross weight. VGs are available from Micro Aerodynamics, Pacific Northwest Aero LLC, through RAM, as part of the company's speed mod kits and through Boundary Layer Research. Micro Aerodynamics is at [www.microaero.com](http://www.microaero.com) and 360-293-8082; Pacific Northwest is at [www.pnwaero.com](http://www.pnwaero.com) and 541-388-9902; Boundary Layer Research is at [www.blrvgs.com](http://www.blrvgs.com) and 425-353-6591.

As for owner groups, there are two: The Twin Cessna Flyer is headed by Larry Ball and can be found at [www.twinessna.org](http://www.twinessna.org) while the Cessna Pilot's Association can be contacted at [www.cessna.org](http://www.cessna.org) and 805-922-2580.

### **Owner Feedback**

As a professional broker specializing in twin Cessnas, I evaluate, sell and fly several 340s each year. Of all the Cessna twins, no other aircraft has evolved into a better aircraft for its role as an introductory pressurized, cabin-class airplane than the 340.

The typical 340 buyer is moving up from a high performance single such as a Cessna 210, Mooney, Bonanza or non-pressurized twin such as a 310, Seneca or Baron. Many a Beech loyalist, in love with an A36 or Baron, will purchase a 340 as an interim aircraft in order to gain experience for a future King Air. The 340 buyer often has young children who will not wear oxygen masks, may have ear problems or they simply feel it is time for both their growing family and business to move up to a pressurized cabin-class airplane.

In my mid-late 1970s life as a Cessna marketing type, the criticism of the 340A was the low useful load with full fuel of 163 gallons. The typical 340 left the factory with a useful load of approximately 1450 pounds. The introduction of vortex generators in the 1980s and the after-market RAM horsepower increases provided useful loads of approximately 1750 to 1850 pounds, which dramatically changed the 340 market. I tell customers to count five engine options on 340s: (1) Standard engines at 310 HP, (2) the RAM IV at 325 HP, (3) RAM VI and (4) RAM VII, each offering 335 HP and (5) a standard 310-HP engine with American Aviation intercoolers. This last combination provides for "RAM IV-like performance".

I estimate about 60 percent of existing 340s were manufactured with what is called full de-ice. This is defined as boots, hot props and an alcohol windshield. This setup is more than adequate for the majority of 340 pilots. About 35 percent were built with the known-ice kit. To the average pilot, this means a heated strip on the pilot's windshield vs. the alcohol system. A small percentage of 340s don't have boots or other de-ice equipment. They are difficult to sell and their value is dramatically reduced.

Air conditioning might be the factory system, which is located behind the right engine. The engine must be running to get cool air from this system. The Keith System, also called JB Air by many, is electric and can be powered by a ground

APU, although in the real world of FBOs, a 340 doesn't get the APU.

The major concern of buyers I hear from is the parts question for factory air. Cessna hasn't purchased large supplies of vendorsupplied air conditioning parts in years. Keith Environmental Systems is in business at Addison Airport in North Dallas. I've rarely had calls from owners with factory air having parts problems.



A typical 340 paint job will cost approximately \$15,000. Complete new interiors cost \$10,000 and up. I've not seen a 340 with a full Cessna 400 series avionics package in many years. Hundreds were delivered with Cessna avionics and other marketing packages referred to as II or III models. The Roman numeral means nothing to the FAA or real-world panels today.

**Many 340 panels have been upgraded, such as Hilary Miller's, which has a Garmin center stack.**

The majority of 340s have Bendix/King Silver Crown or Collins Microline avionics. Many 340s still have a Cessna R446 ADF and RT459A transponder installed. Why? They're pretty good. The Cessna 400B autopilot with an HSI or the 400B with an autopilot and double-cue (cross pointer) flight director is found in the vast majority of 340s.

Like all general aviation aircraft, a significant number of 340s now have Garmin 530 or 430 units and other Garmin, UPSAT and new technology Bendix/King avionics. S-TEC autopilots are becoming more common. The King KFC200 is an excellent unit and commands increased value. There are avionics shops that can maintain the Cessna autopilots so there's no reason to not have a fully functioning 400B in a 340.

The Robertson STOL System, marketed in the late 1980s as the R/STOL system, is no longer available. Sierra Industries in Uvalde, Texas owns the STC and still provides limited parts support.

Sierra has not installed a twin Cessna R/STOL kit since around 1990. This high-lift system is a true short takeoff and landing distance reduction system. The added lift also creates a better handling aircraft on one engine. A limited number of STOL system-equipped 340s are flying.

Spoilers (speed brakes) are nice to have and certainly aid in rapid descents without excessive power reductions and rapid cooling, but a well-trained pilot focusing on descending and cooling can manage without spoilers.

Most pilots fly in the high teens to low 20s. I rarely take a 340 above 21,000 feet. Most owners flight plan for 190 knots and will see 190 to 205 KTAS. Fuel flow is 30 to 36 GPH. The aircraft flies nicely with the nose baggage area loaded. The pressurized aft-cabin baggage area is valued by families with kids where food, toys and all the gear that often goes into their SUV for a weekend to Grandma's also fits into a 340.

I tell prospective buyers to be prepared to spend \$10,000 to \$15,000 for annual inspections. The major maintenance on a 340 or any twin Cessna must be conducted by specialists. When this isn't done, owners pay heavily when selling. I regularly witness pre-purchase inspections where the lack of maintenance expertise will cost the seller.

Insurance is an issue throughout GA but has significant impact on the 340 buyer, since this pilot is often a low-time pilot and often a new multi pilot. I have worked with insurance companies and the various training firms to get many pilots coverage. Often, a special training program is required.

I urge every twin Cessna owner and pilot to take their "pilot maintenance" just as seriously and on-schedule as they do aircraft maintenance. This means regularly scheduled training at one of the simulator schools and alternating training with one of the insurance-approved in-aircraft training firms. Although much of this training is now a requirement for obtaining

insurance, it must be approached not as a burden but as a critical element of ownership.

Membership in the Twin Cessna Flyer organization and attendance at their weekend seminars is also a must, in my opinion. It's the best \$50 a twin Cessna owner can spend. Last, the fuel system. It's no big deal. I prove it twice a month to new twin Cessna owners. If you're at a stage in flying where you're piloting a pressurized cabin-class twin, the fuel system of a 340 with its tip-tank mains, in-wing auxiliary tanks and optional nacelle wing locker tanks can be mastered in one 3 1/2 hour cross country. It's time to stop the scare talk.

I'm often asked which twin Cessna is my favorite. This is a difficult question to answer because aircraft fill market niches. However, I enjoy flying the 340. On takeoff, it rotates like a big aircraft and upon landing, it has a true land-on-the-mains-and-lower-the-nose feel.

Sales were slower in 2001 and 2002 and prices sagged. Thus far, 2003 has been stronger in both volume and price. I tell buyers that it remains a good time to buy a 340, but for those persons locked into the mind-set that it's a soft market (buyer's market) and believing that they've got to steal a great aircraft, the odds are great that they'll not succeed.

Good aircraft, especially those with knowledgeable representation, will command a strong price; not excessive, but no bargain, either. However, I advise sellers not to dig in their heels and try to force a market that's not yet strong.

For many a business and family, a Cessna 340 is an ideal airplane. Go fly for 3 1/2 hours at 200 knots at 20,000 feet burning 36 GPH with two persons up front and two or three in the cabin. Several times a year I get to witness from the right seat the excitement of a new 340 owner taxiing in with family, parents, employees and/or friends awaiting their arrival. I like what I do.

-Jerry A. Temple  
Jerry Temple Aviation, Inc.  
[www.jtatwins.com](http://www.jtatwins.com)

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I believe this airplane offers the most capability for the dollar. If you're looking for the redundancy of two engines, pressurization, RAM quality, with the ability to add modern avionics, this airplane is hard to beat.

Today, you'd spend well over \$1.5 million if you could buy it new. All this for less than a new Saratoga or A36!

-John A. Martins  
via e-mail

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I have owned my 1979 Cessna 340 for just three months. I bought the 340 to replace my Seneca III that I owned for six years. It was my first twin. I wanted a pressurized airplane and had originally planned on buying a Mirage, but when I got into it, I found I am hooked on the extra performance plus the extra margin of safety a twin provides.

I wanted reliability and the 340, properly maintained, has a good history. The shop that maintains my airplane is a 340 specialist.

They did the pre-purchase inspection and know how to look for things that can eat up a lot of cash to make right. They operate many 340s themselves and stock parts along with having a staff of experienced 340 technicians, a definite plus with this airplane.

These airplanes are very complex machines. Take a look at one opened up during an annual and take a deep breath. The technical documentation is not very good, so a technician with a lot of pressurized 300/400 experience is critical if you want to keep these airplanes in good condition.

I chose the 340 because it fit my mission needs, has a comfortable cabin and I like the looks. My daughters are impressed because it has an "aisle" (sort of) and they are not squished into the back. The 340 is much roomier than any airplane we've had in the past.

My purchase came after looking for several months for the right airplane. I found that the good ones sell fast, the OK and not-so-good ones seem to be around for awhile. Bottom line is you get what you pay for. To get a really good airplane, plan to pay more. My airplane is a stock-powered 340A with AA intercoolers, known ice, VGs and new avionics.

I was required to complete an "approved" training course to get insured. I have 1200 hours multi-engine time but I still spent 10 hours of ground and 12 hours flying the 340. I highly recommend the formal schooling because although this is not a difficult airplane to fly, it is a complex machine. The schooling teaches you the systems, but the problems will come in the operation; the more you understand it, the better. The fuel system is complicated, but once understood, I find it easy to manage. Weight and balance is a concern because the airplane is aft heavy before loading; the nose locker can be used to counter this. I have 50 pounds of ballast in my nose locker.

After the training course, I feel very confident to use the airplane for my business travels and I expect to do annual training. My insurance costs are higher, considering that smooth or higher limits aren't available until I log more time. I pay \$900 for \$1 million, \$100,00 seat liability, the all-risk hull insurance is \$4000.

I expect to be able to get the smooth limits next year at the same price I am paying today. I experienced the same thing when transitioning from a single to my Seneca. I had a choice of insurers as long as I completed a formal training course.

The airplane is a joy to fly and is straightforward in all flight configurations. The controls are light and responsive and it is much easier to fly with precision than my Seneca. Headings and airspeed are easy to hold making for stable ILS approaches.

My flying is typically loaded with fuel and/or people and climbs are 1000 FPM to the mid-teens with no temperature issues. It's very comfortable on long flights with good cabin heating/cooling systems, good visibility and excellent seat comfort. The pressurization is the frosting on the cake!

With the AA intercoolers, it's faster than book at all altitudes, but I use more fuel too, 65 percent and 100 degrees rich of peak TIT requires 34 GPH. I am sure I could run at lower fuel flows as the airplane has GAMJetectors, but I have not explored that area yet.

Too soon to know just how much this will cost me, but I don't expect my cost/mile to be that much more than the Seneca was. But the speed, comfort and freedom from the O2 hose make up for this. My Seneca was a good, reliable airplane, but the 340 is a giant step up in performance, capability and comfort. It has just been a short time of ownership but I am permanently spoiled.

-Jim O'Day  
Fargo, North Dakota

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I'm pretty partial to the 340. Ours served us very well for personal transportation for nine years. For a pressurized aircraft, it's relatively simple, is assembled from well-established systems and offers decent maintenance access.

I no longer have good financial records on the 340, but I'm sure the operating costs were at least \$300 per hour. My last insurance premium was \$5451 a year for \$5 million smooth with a hull value of \$200,000. That hull value and those insurance rates are presumably ancient history.

Were I to buy one today, I would be looking for: Documented, conscientious, maintenance; reliable avionics and a Bendix/King 200 autopilot. In today's market, you can probably find what you're looking for. There are presumably some well-equipped, well-maintained



airplanes out there with less than 3000 hours.

Ours had the full 203-gallons and I would give serious thought to doing without one nacelle tank in favor of air conditioning. One of the RAM engine upgrades could make that trade-off unnecessary, but I have no experience with those STCs.

As for the demographics, I live in Chicago—with a view of what was once Meigs Field—and the airplane was based at Midway. I was the only pilot for the nine years we owned it and I believe that having only one pilot, who also signed the checks, contributed to the reliability we experienced.

-Tex Hull  
Chicago, Illinois

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I have owned my 1975 Cessna 340 since April 1998 and have just over 1300 hours in it. I feel it is one of the best all around planes for the money in aviation today.

I will admit that I have almost completely redone the plane in the last five years. It now has the complete Garmin Stack (including 330 transponder), Sandel EFIS, Avidyne EX 500, S-TEC 55X with altitude and vertical speed preselecs, GEM, new deice boots, Stormscope, new interior, Shadin fuel and air data computers. In addition, two years ago it went to RAM aircraft and had the RAM VII package installed. It already had VGs installed. I flight plan for 210-215 Knots in the low flight levels at 65% power (19.3 gallons/hour/side). Insurance costs \$5000-6000 per year and annual training is recommended. I have used RTC in Illinois and Ron Cox in Florida and they have been very good.

The plane is an extremely stable IFR platform and is fairly easy to fly for a pressurized twin. I fly routinely to Florida and Michigan through out the year and it seems to be more reliable than the airlines. Fuel management is an area that some people get in trouble with, however, understanding the system makes for little problems. The pressurization is easy to use and has been very reliable. There is plenty of room to pack luggage in the nose, wing lockers and aft.

Now the bad news. I have had two incidents of corrosion in the area of the turbochargers. Getting into the cockpit with two big guys can be a challenge, however, once seated, there is plenty of room. I am a member of the Cessna Pilot's Association and Twin Cessna Flyer are find that they are good resources for advice and information.

-Rob Schick, DVM, DACVD  
Marietta, GA

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I purchased my 1976 340A in August 2003. The catalyst for such a purpose was a growing family, and their intolerance for long flights, especially at any altitude above 8000 feet. We had been flying our 310N across the country from Santa Monica, California to our children's grandparent's houses in Pittsburgh, Nashville, and my parent's getaway in Destin, Florida. One such trip from KSMO to KMBT resulted in my wife and children getting quite ill from a prolonged period above 10,000 feet. Although my children were only one and three years old, my wife informed me that they would not see their grandparents again if we were to fly the 310. I, like most pilots, have an aversion to the airlines. So, it was time for the upgrade.

I decided early on that the route that I would take was to contract with a broker on an acquisition type contract. Who better than Jerry Temple, of Jerry Temple Aviation (JTA). This method was a Godsend and I would recommend it to anyone.

Making such a large financial purchase, and not having a representative on your side has got to feel quite lonely, and ultimately, the buyer is paying all the broker fees anyway. Why not stack the deck in your own favor? Jerry handled my entire transaction from one end to the other, even selling the 310 for me. Besides setting up flight school (SIMCOM in this case) and attending it with me, he traveled to all the sites of the 340A's that he thought suitable for our budget.

We spent four days together in Defiance, Ohio doing the pre-buy with the owner present, and Jerry walked me through the entire process. When the sale was final, he even acted as my check out pilot for the 5 hours of dual required by my insurance carrier.

My gosh what a world of difference. All the weather that I used to slog through at 12,000 feet can easily be cleared. After I purchased the airplane, I met my wife and children in Nashville, we flew to Destin, FL, and then they accompanied me all the way back from Destin to Santa Monica in one day. No headaches, no hypoxia and lots of weather, only this time looking down at it or 50 miles away from the big tall buildups. With all the onboard equipment (radar and Stormscope) as well as the de-ice, this is quite a capable airplane, but I feel that it's best capability is to stay out and above of the weather. It makes for a really nice ride. I cannot say enough about how comfortable and fun to fly this mini-airliner is.

Buying a 340 or 340A is no small financial feat. Although I bought a 340A in great shape and with a thoroughbred RAM VI conversion, at comparable market price for a bird in this condition (\$275,000), I was aware that a new buyer (me) and my new team of mechanics is going to spend some money on some deferred or missed maintenance.

And spend I did. The pre-buy indicated that the landing gear was out of rig, and having had personal experience with my Cessna 310 having a gear problem resulting in a nose gear up landing, I was not about to try to cut costs in this department. I took the newly acquired 340A to a certified Cessna repair station, Tom's of Long Beach, and immediately spent \$17,000 on the work, which included the re-rigged gear and parts, and all new wheels and brakes.

Also included was the cost of the lower half of the cabin door that we bought from a salvage yard (\$1,700 with core exchange) that was found to have a crack in the frame during the pre-buy.

Two months later the annual was due, and again, lots of money spent. It was not the annual that was expensive, it is all the items that, after a consultation with the shop, I elected to have done. Besides the annual, pitot/static check, and having the cabin door installed and painted, I electively did the prop overhauls (recommended every 5 years), and did service bulletins for engine beam protection blankets and stainless steel crossfeed lines.

Altogether, \$23,000 and change. Oh, did I mention the windshield crazing that I had polished out for another \$3,000? I write this not as a complaint, but an indication of what even a well maintained 340, that happens to be 28 years old, might take to make it yours. I was braced for around \$20,000 in maintenance items, but I already have spent over \$40,000 without owning the airplane for four months. So far, my hourly operating costs are high, to say the least. But now I have a new comfort level that this airplane, which would cost well over \$1,000,000 to build today, will serve me well into the future.

I have been flying for 26 years, and for the first time (all ego), people are really, really impressed. I used to hear "...that's what we're flying in?... ", or "I don't like those small airplanes/" Now, even the most distrustful general aviation passengers (my Mom) are sold. This is the life. I truly have no complaints about what the 340 is. It is beautiful to look at, has too much baggage space, gives you a beautiful ride in smooth and turbulent air, and is truly a cabin class airplane. It flies like it should for a cross country airplane. I look forward to many years of being the captain of my own airliner.

To close, some stats from my first 70 hours. True airspeed at FL 230, 30 inches and 2300 RPM is 215 knots. Fuel burn at that power setting is about 105 pounds per side. Plan on 50 gallons per hour your first hour, then 35 gallons per hour thereafter. On a flight at 17,500 feet from Tacoma Narrows (Seattle) to Santa Monica, I set the power at 55%, saw 195 TAS the whole way, and made it non-stop with 15 gallons per side to spare (183 gallons total) in 4:15. Had I been greedy with speed, I would've had to make a fuel stop and gotten there later. The 340 can fly at speeds that



Passengers like the 340's airstair

my 310 did for almost the same fuel burn. This airplane **door.** has a very wide operating range. As far as payload, it does all it needs to in that department also. I can fit five 200 pounds men, 126 gallons of fuel, and 40 pounds of fishing gear and be at allowable gross weight. That would get us 2:30 flight time with VFR reserves, or about 460 miles away. Or, my entire family (wife plus two kids), full fuel, and all the bags that we'd want to carry, and do an easy 850 miles. That's all we need. We love our Cessna 340A.

-John Peruzzi  
Los Angeles, CA 90034

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I have owned a Cessna 340A Ram VI for two years. (I purchased it 9/9/2001) With a few caveats it is a fantastic airplane. It is comfortable, fast, quiet (especially with Bose X's) and a good platform for hard IFR. First the Caveats:

The Cessna 340A is a pressurized cabin class know-icing twin. An equivalent aircraft (none are available yet) would cost around \$1.5 million. A well equipped one will have dual everything and enough panel space to hold almost all the avionics you could ever want. Maintenance costs reflect this. If you're going to skimp on maintenance costs, don't get one. It is a fast (220 knots cruise) heavy (6400 pounds) high altitude (mid 20's) aircraft. You must stay ahead of this aircraft. As an example, ATC frequently forgets you are not a turbine and will try to keep you high and fast until the last possible moment. Recurrent training once or twice a year is a must. If you don't want to do that don't get a 340.

### **Good things**

Having given you the caveats, it's a great all weather go anywhere anytime in the continental U.S. aircraft. Only freezing rain and thunderstorms stop you (frequently you can get around those.) I fly in the Pacific Northwest (Billings, MT to Seattle, WA) and spring through fall and icing can be impressive. You can get out of the icing conditions with this airplane, it will carry and shed a fair amount of ice while you are doing it. I can get anywhere in the lower 48 in less than eight hours flight time from Billings and not feel like dog meat when I get there.

I am impressed how pressurization and the decrease in noise has decreased my fatigue. I have four hours endurance with IFR reserves. That means on most days I can fly non-stop from Billings to Seattle, Oakland, Scottsdale, Sante Fe, Minneapolis, or Chicago. It's a very strong airplane and at altitude you cruise at or around maneuvering speed. Perusing the NTSB data, it seems to me that most, if not all, fatal accidents are secondary to pilot problems not mechanical problems. If you keep yourself sharp, this plane will not let you down.

### **Costs**

I burn about 42 gallons and hour. Insurance is \$7200 per year on a \$400,000 hull \$1,000,000 liability. I'm still paying for the sins of the previous owners so I don't have a good handle on average annual costs yet.

### **Must haves on a 340A**

1. A RAM package-- increased speed, increased gross weight (because of single engine performance improvements) and VMC drops below stall speed.
2. Spoilers--the ability to emulate the flight characteristics of a rock is a good thing when you're shooting approaches with jets and approach wants you down now. You can also use them to kill all that excess airspeed when you need to.
3. Known icing. The FAA is getting more strict on flight into icing "Nobody knows what known icing is," doesn't cut it anymore.

### **Bad things**

1. The gear speed of 140 Knots is too low.

-Brian A Bross  
Via e-mail

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I have operated a 1980 340A Cessna for the last two years for 250 hours per year totaling 500 hours. I purchased the aircraft with 2,700 hours on December 10, 2001, with 300 hours on Ram VI engines, two years on paint and interior and new boots (new boots about \$15,000 installed). The aircraft cost \$350,000 and was, in my opinion, a fair value in view of the market slide which was well underway, but has dropped further. The seller had started about a year earlier at \$420,000, and dropped to \$400,000 and \$380,000, and cut the purchase when he had found his replacement Citation CJ.

The avionics were all King with air data by Shadin, KLN90B, and the RDR2000 radar. I invested an additional \$20,000 to install the Garmin 530, WX500 storm scope, JPI engine monitor and an electric attitude gyro, which I would not want to be without having experienced in other aircraft multiple vacuum pump failures, three primary attitude gyro failures, and autopilot failures. I feel the current value of the airplane with 800-hour engines (1,600-hour TBO) and 3,300-hour airframe is from a low of \$300,000 to a high of \$350,000 in a very soft market. This is a top 10% quality 340.

I just renewed aircraft insurance at a 1.5% hull rate plus \$2,500 for \$1M single-limit liability (a \$100,000 per passenger sub-limit would have been \$1,500). I have 4,500 hours total time, but only 550 hours multi with 500 in a 340. I transitioned from a Continental-powered Malibu with 1,000 hours over 3½ years when I experienced a total engine failure on takeoff at 400 feet at night over the city of Milwaukee. My old insurance company just renewed me.

The Cessna 340 is a solid straightforward aircraft to fly as a transition from a Malibu or Bonanza with the understanding of the systems, fuel systems, turbo-charging, and two of everything. Actually, the aircraft is easier to land than a Malibu because it is very stable and you do not experience the float when you pull the power like you do in the Malibu. The numbers for cruise speeds are almost identical to the Malibu Continental engine, which uses 20 gallons at 65% power. The 340 Ram VI 335 hp engines burn 18.3 gallons at 65% power and 15.6 gallons at 55% power. An honest 20,000-foot altitude standard temperature speed is 200 knots in both aircraft at 65% power. Range with my 203 gallons usable is 800 miles (900 miles nautical at 55%). This assumes 30 gallons reserve plus 18 gallons used extra in the taxi and climb.

The 340 airframe is much stronger than the Malibu as evidenced by the 340's 155-knot maneuvering speed as compared to 125 in the Malibu. Takeoff power in the 340 flows 36 gallons per hour per engine for 1,500 feet per minute at gross of 6,390, cruise climb is 27 gallons per hour with 1,000 feet per minute. The 340 Continental engines are very similar to the Continental Malibu engines, but in my experience and what I hear, especially with RAM engines, have fewer problems with cylinders and the turbochargers than the Malibu. I have operated the 340 500 hours plus 300 by my predecessor with no cylinder changes and my compressions are 77 or better on 11 of the 12 cylinders with one cylinder low 60's due to some passage through the rings, but not valves. I attribute the better cylinder survival rate to the lower cylinder head temperatures in the 340, which I see as 360°F up high and 325°F down low, which is 20°F to 30°F cooler than the Malibu application.

The Ram VI or VII mod increases horsepower from 310 to 335 horsepower, increased gross weight 5,990 to 6,390 (includes VG's), VMC reduction from 82 to 71 knots, with the blue line VYSE still at 100 knots. With the Ram 6 and VG mod increase in gross weight, my useful load is 1,800 pounds and full fuel payload is a respectable 600 pounds (full fuel payload in the Malibu was 350 pounds, but had an 1,100-nautical-mile comparable range to the 800-nautical-mile range of the 340). Since I typically fly with one to four people, I have removed the two rear seats behind the pilot leaving two facing rear seats behind the co-pilot's seat for an incredibly comfortable cabin and no floor lump for the wing spar. This is a great simple solid aircraft that is an excellent transition for a Malibu pilot considering the micro-jet transition.

For operating expenses, I budget \$50 per hour for parts, \$50 per hour for labor, and \$100 per hour for fuel. My insurance cost is \$8,000 plus two locations T-hangars for \$6,000, about \$3,000 for the inspection, and \$3,000 for training. This totals \$60,000 out-of-pocket per year without time value or interest on the investment and without engine and prop reserves, which is approximately \$60 per hour.

-Jon D. McMurtrie

Via e-mail

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I have owned a 1981 340A since August of 1993 and have flown it approximately 1200 hours. I repainted and redid the interior in 1997. I did major overhauls to both engines and propellers in 1997 as well. It has averaged about \$40,000/year to run the aircraft. This includes all maintenance and repair for airframe, engines and avionics, insurance at \$2 million smooth and \$390,000 hull value, heated hangar, all fuel and miscellaneous expenses while traveling. The only items not included in that figure are the cost of paint, interior and major overhauls.

I maintain the aircraft to the highest standard with nothing ever deferred or not operating properly. The aircraft is based in western Massachusetts and I have flown it to Vancouver Island in Canada, the Virgin Islands in the Caribbean and numerous trips to California and Florida. I have flown in icing conditions, over long stretches of ocean (125 miles from shore) over the Rocky Mountains and night IFR. I have never had a moment when I didn't feel secure with the twin engines and instrument redundancy as well as the high altitude capability of turbo charging in the comfort of a pressurized air-conditioned cabin.

The airplane is as happy at 6000 feet as it is at 23,000 feet. The fuel burn is constant for a given power setting regardless of altitude. I usually see 175 KTAS at 6000 feet and 205-210KTAS at 23,000 feet burning about 37GPH (65% power). If you have a good tail wind you can throttle back to 60Pct power and burn 32GPH and still cruise at 190KTAS at around 20,000 feet.

I have extra long range fuel tanks (220 gal capacity) and have made it from Fort Lauderdale to San Juan Puerto Rico non stop (912 nm) in 4 hours and still had 60 gals of fuel left. I have made it from Seattle to Massachusetts in 9:25 with one stop. Even on the hottest days and at gross weight I have climbed from sea level to 23,000 feet in 33 minutes. In the cooler months and somewhat lighter weights the aircraft will have an initial climb of close to 2000 fpm and will reach 18,000 feet in about 15 minutes. That climb rate is of great value when trying to top winter icing conditions.

The aircraft has a lot of very desirable mods. The VG's add 300 lbs of gross weight (GTOW 6290lbs) and reduce VMC to 71KIAS. The aircraft stalls very gently at 60KIAS which allows you to approach short strips (2000 feet) at 80KIAS on short final and come to stop with room to spare. Power Pac spoilers are a necessity to slow the airplane down without being a throttle jockey. The American Aviation intercoolers give RAM like performance on climb while the engines stay well within the green even on long climbs on hot days. The O&N locker tanks add an additional 37 gals of fuel to the factory tanks of 183 gals and you can stay in the air (without reserves) for over 6 hours at 65% power.

The airplane is equipped with a KFC 200 autopilot and King/Garmin avionics. It has a RDS 81 color radar and WX10A stormscope. I haven't had any unusual problems with that equipment. I have heard the Cessna avionics and autopilot are troublesome but I cannot comment on them. There have not been any unusual problems with the airplane, however, it is a complex machine and things break from time to time and repairs are not like owning a Skylane.

I have enjoyed every hour flown in my 340A for the last 10+ years and have never had to scrub a business or pleasure flight because the airplane wasn't ready to fly. I have had to delay and rarely cancel a flight due to weather. After all, even though this is a high flying weather capable aircraft, there are times when the weather is such that you shouldn't be in the air.

-Richard Jaffe  
Via e-mail

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